2016 Instructional Design and Innovation Institute

**Student Engagement: Acceleration**

In efforts to increase the number of students who ultimately complete transfer-level math and English, faculty have been redesigning curriculum to streamline developmental sequences and effectively prepare students for success at the transfer level. This curricular redesign, often called acceleration, has been successfully implemented in a variety of ways across the state. This panel of five faculty will share effective models of acceleration and their impact on student outcomes.

**Facilitator:**

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**Brief Program Descriptions:**

**Jeanne Costello – English faculty**

In the English Department at Fullerton College, we have developed an accelerated pathway to prepare for College Writing as an alternative to our traditional developmental writing sequence. In Fall 2014, after a 5-semester pilot, we began to offer a one-semester, open access “Accelerated Preparation for College Writing” (English 99) class that meets 5 hours a week. Backwards-designed from our College Writing course, English 99 provides intensive practice with college level reading and writing assignments. The course also includes a component that addresses growth mindset and other affective issues to help students build capacity for dealing with the course’s rigor. Since the beginning of the pilot course, students in the accelerated pathway have been completing the transfer-level composition at a higher rate and in a shorter time than students who began two or three levels below College Writing. Our original sequence was three levels, which we will reduce to two levels beginning in Fall 2016. The ESL and Reading Departments at Fullerton are currently piloted accelerated curriculum of their own.

**Katie Hern – English faculty, CAP English and Math**

The California Acceleration Project (CAP) is a statewide professional development network that supports California community colleges to increase student completion of transfer-level requirements in English and math and narrow achievement gaps between groups. We don't advocate a single "model" in CAP but instead support colleges to transform their placement policies and remedial curricula to accelerate students' enrollment in transfer-level courses and implement high-challenge, high-support instruction.

Faculty working with CAP share a set of design principles that give developmental students the same kinds of content and tasks they see in a college-level course, but with greater support and scaffolding. CAP pathways engage students with rich, thinking-oriented curricula and provide just-in-time remediation of relevant foundational skills, with attention to the affective dimensions of learning and plenty of low-stakes, collaborative practice in class. In math, CAP pathways depart from the traditional one-size-fits-all approach to remediation and instead tailor support to the specific transfer-level math course students take in their chosen program of study (algebra preparation for students pursuing STEM and other calculus-based fields and for other students, an emphasis on quantitative reasoning in redesigned statistics pathways).

According to a quasi-experimental study by the RP Group, colleges participating in CAP are seeing "large and robust" gains in student completion of transfer-level English and math. After controlling for 13 variables that influence completion, the researchers found that in high-impact English pathways, students' odds of completing transfer-level English were 2.3 times higher than in traditional remediation; in CAP statistics pathways, their odds of completing a transfer-level course were 4.5 times higher. The study further found that all students benefited in effective accelerated pathways and that no students were harmed. In a follow up analysis of descriptive data, the researchers found that achievement gaps for African-American students were eliminated in CAP statistics pathways.

While some faculty have raised concerns that moving away from algebra-for-all remediation might hurt students' performance in their broader general education coursework, early data suggest this is not the case. Three CAP colleges have examined students' performance in quantitatively demanding courses in economics and the physical and life sciences and found strong outcomes among students who had completed accelerated statistics pathways. At all three colleges, students were passing these courses at rates higher than 70%, and at two of the three colleges, their pass rates exceeded 80%.

**Mary Legner – Math faculty, Math C-ID**

JumpStart Program

It appears that the best way to present what the C-ID Math Faculty Discipline Representative Groups (FDRG) are working on is to refer to Resolution 9.14 F15 from the Fall 2015 Plenary Session. The University of California and California State University systems have indicated their willingness to grant credit for math courses that have a prerequisite other than intermediate algebra as evidenced by recent communication from their Chancellor’s Office to Articulation Officers. The catalyst for this was that many community colleges had introduced statistics pathways that permit such prerequisites. It would be beneficial to define these prerequisites if alternatives to intermediate algebra are to be recognized as appropriate prerequisites within the CCC system for transfer-level courses. As a result, the C-ID Transfer FDRG is considering alternative prerequisites for C-ID Math 110, Introduction to Statistics descriptor. The Basic Skills Math FDRG has initiated development for descriptors for alternative prerequisites for statistics.

On another note, Riverside Community College’s Math JumpStart class/program is a 3 to 4 week intensive course of study that provides a student the opportunity to advance to a higher-level math course. Many students who have taken our JumpStart course have advanced one or two levels. For example, a student who has tested into arithmetic can be eligible to take elementary or intermediate algebra. This can save a student who desires to transfer to a university considerable time and money to complete the necessary math courses to achieve their academic goal. In class, we use an online tutoring and assessment program. Outside of class, we have the academic support via an education advisor of supplemental instructors.

Student places below => Math JumpStart => Reassess at least one level closer

Intermediate Algebra Intervention to transfer Level Math

**Toni Parsons – Math faculty**

MATH 92 is a combinations Beginning and Intermediate Algebra Class designed for non-STEM majors at San Diego Mesa College (SDMC). 10 units of Algebra coursework have been redesigned into a single 3-unit lecture, 1-unit lab course. The semester-long course meets three or four days per week for a total of 6 hours per week. We do use a textbook, but have developed our own “lab packet” of exercises that are done on a weekly basis, with an emphasis on calculator use the class covers all of the algebra topics that are listed on the CSU Entry Level Mathematics standards (except those that we believe are pre-algebra topics), and all the objectives in the CB-21 rubrics for one and two levels below transfer. The college district has also approved this course for the AA math competency requirement, and both University of California San Diego and San Diego State University articulate SDMC’s statistics course with this course as an alternate pre-requisite. SDMC has been offering this course for several years now and the data shows that students exiting MATH 92 are passing statistics at comparable rates to traditional algebra students. Also, for students beginning with MATH 92, the percentage of students passing a transfer level math class is 16% as compared to 12% through the traditional path, with even higher jumps amongst students of color.

**Becky Rudd – English faculty**

Eighteen units of English and Reading coursework were redesigned into six units of College Success English coursework.

Multiple factors led to the development of this integrated course sequence. First, we noted particularly high persistence and success rates for Fast Track courses (eight-week, accelerated courses) and Learning Communities. In fact, the highest persistence and success rates were found in combined fast track and learning community courses.

Second, at the state level, factors such as AB 1440, CB 21, FTES cuts, limits on units to completion, limits on financial aid, and concerns over time to completion were influential in the move towards redesign. Finally, research as part of a faculty’s doctoral study indicated that slowing down the developmental track de-motivates students and results in lower retention and completion rates.

In response to these factors, English and reading faculty proposed an idea for curriculum redesign and vetted it through all constituency groups in a collaborative effort of faculty, management, staff, and students. This transformational change, which took place during spring 2011 and was accomplished from start to finish in one month, included:

* a curriculum redesign into two English courses that employ an integrated English and reading model
* curriculum committee revisions and approvals on all course outlines
* revisions to board administrative procedure on graduation requirements
* changes in Accuplacer cut scores

The advantages of this realignment are numerous and include:

* elimination of redundancies in skills development and content,
* collaboration between English and Reading faculty,
* increase of basic skills sections taught by full-time faculty,
* significant reduction of time-to-completion and fewer units for students,
* reduction of FTES devoted to basic skills,
* an increase in number of students served in the sequence,
* fewer units to meet English and Reading competencies,
* reduced textbook costs because students purchase fewer books,
* fewer exit points in the English sequence, and
* more productive use of financial aid.

Finally, preliminary data from the first year of the new sequence indicates increased student success, completion, progress, and improvement rates in the English course sequence.

**Questions for the Panel:**

1. What factors have most supported your ability to successfully implement redesigned curriculum on your campus?
2. How has the student learning experience changed as a result of your redesigned course or program? What does a typical class session look like?  That is, describe what we would see if we visited your class. How has the process of redesigning and teaching new developmental curriculum influenced your teaching more broadly?
3. What challenges or obstacles have you faced in developing and implementing your redesigned curriculum?
4. How does your college measure student success in the redesigned course or program? In subsequent course work, how do students that successfully complete the redesigned course or program compare to students that successfully complete traditional courses or programs? How does your college collect the data for these results, and is there enough data for the results to be significant?
5. What support services help students in being successful in the redesigned class?
6. What additional resources are required by your college to implement and support your course or program?  What additional costs are passed on to the students? Besides prerequisites, are there any other requirements that a student must meet to enroll in the course or program?
7. What issues are there with the course or program satisfying transfer or prerequisite requirements at other community colleges or universities?
8. How far has the communication of your course or program reached to other disciplines?